

IN THE CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A modulating apparatus of an on-channel repeater which receives a signal on one channel and distributes the signal on the same channel, comprising:

a baseband signal configuring means for configuring a baseband signal by combining an input field and a segment sync signal;

a pilot adding means for adding a pilot signal to the baseband signal;

an up-sampling means for up-sampling the baseband signal with the pilot signal added thereto;

a filtering means for filtering the up-sampled baseband signal with the pilot signal added thereto, wherein the filtering means generates an in-phase (I) signal and a quadrature (Q) signal and performs filtration;

a first digital-to-analog converting means for converting the filtered in-phase (I) signal into a first analog signal;

a second digital-to-analog converting means for converting the filtered quadrature (Q) signal into a second analog signal;

a first radio frequency (RF) up-converting means for directly up-converting the first analog signal into a first RF signal;

a second radio frequency (RF) up-converting means for directly up-converting the second analog signal into a second RF signal;

an adding means for adding the up-converted first and second analog signals;

wherein the filtering means uses a window method using window functions of Kaiser, Hamming, Hanning, and Blackman.

2.-5. (Cancelled)

6. (Currently Amended) The modulating apparatus as recited in claim 1, wherein the filtering means includes an Equi-Ripple (ER) filter ~~and uses a window method.~~

7. (Cancelled)

8. (Currently Amended) The modulating apparatus as recited in claim 1, wherein the filtering means includes a square root raised cosine (SRRC) filter ~~and uses a window method.~~

9. (Currently Amended) A modulating method of an on-channel repeater which receives a signal on one channel and distributes the signal on the same channel, comprising:

baseband signal configuring step of configuring a baseband signal by combining an input field and a segment sync signal;

a pilot adding step of adding a pilot signal to the baseband signal;

an up-sampling step of up-sampling the baseband signal with the pilot signal added thereto;

a filtering step of filtering the up-sampled baseband signal with the pilot signal added thereto, wherein said filtering generates an in-phase (I) signal and a quadrature (Q) signal and performs filtration;

a first digital-to-analog converting step converting the filtered in-phase (I) signal into a first analog signal;

a second digital-to-analog converting step converting the filtered quadrature (Q) signal into a second analog signal;

a first radio frequency (RF) up-converting step directly up-converting the first analog signal into a first RF signal;

a second radio frequency (RF) up-converting step directly up-converting the second analog signal into a second RF signal;

adding the up-converted first and second analog signals;

wherein, the filtering step, utilizes a window method using window functions of Kaiser, Hamming, Hanning, and Blackman.

10.-13. (Cancelled)

14. (Currently Amended) The modulating method as recited in claim 9, wherein, the filtering step, an Equi-Ripple (ER) filter ~~and a window method are~~ is used.

15. (Cancelled)

16. (Currently Amended) The modulating method as recited in claim 9, wherein, the filtering step, a square root raised cosine (SRRC) filter ~~and a window method are~~ is used.